

PLAZER, Z.; SLABOCHOVA, Z.; ROURAL, Z.

Esterolytic activity of serum following administration of heparinoid.
Cesk. fysiol. 8 no.3:236-237 Apr 59.

1. Ustav pro vyzkum vyzivy lidu, Vyzkumný ustav pro farmacie a biochemii,
Praha. Predneseno na III. fysiologickych dnech v Brne dne 14. 1. 1959.
(HEPARIN,
heparinoid, eff. on serum esterolytic activity (Cz))

PLACER, Z.; SLABOCHOVA, Z.; ROBAL, Z.; NOVAK, M.; HOLECKOVA, E.; SEKLA, B.

Serum esterase activity and mucoproteinemia in rats after the
implantation of Walker 256 tumor. Neoplasma, Bratisl. 7 no.1
suppl:44-46 '60.

(NEOPLASMS blood)
(ESTERASES blood)
(MUCOPROTEINS blood)

PLACER, Z.; SLABOCHOVA, Z.; ROURAL, Z.

Antilipemic activity of gastric mucus. Cesk. fysiol. 9 no.1:
44-45 Ja 60.

l. Ustav pro vyzkum vyzivy lidu. Vyzkumnny ustav pro farmacii
a biochemii, Praha.

(MUCOPROTEINS, pharmacol.)
(LIPOPROTEIN LIPASES)

SLABOCHOVA, Z.; FABRY, P.; HAHN, P.; KOLDOVSKY, O.; MASEK, J.; NOVAK, M.; PLACER, Z.

Effects of 3 diets on certain indices of fat metabolism in rats.
Cesk. fysiol. 9 no.1:50-51 Ja 60.

1. Ustav pro vyzkum vyzivy lidu. Fysiologicky ustav CSAV, Praha.
(DIETS exper.)
(FATS metab.)

PLACER,Z.; SLABOCHOVA, Z.

Comparison of certain enzymatic systems in normal conditions and
in obesity. Cesk.fysiol. 9 no.3:257 My '60.

1. Ustav pro výskum výsivu lidu, Praha
(ENZYMES metab.)
(OBESITY metab.)

SLABOCHOVA, Z.; PLACER, Z.

Esterase activity of the serum during the course of prolonged hypothermia. *Cesk.fysiol.* 9 no.3:263-264 My '60.

1. Ustav pro vyzkum vyzivu lidu, Praha
(HYPOTHERMIA INDUCED exper)
(ESTERASES blood)

PLACER, Z.; SLABOCHOWA, Z.

Colorimetric determination of polyene fatty acids in biological material. Cesk.fysiol. 9 no.6:562-565 N '60.

1. Ustav pro vyzkum vyzivy lidu, Praha.
(FATTY ACIDS chem)

SLABOCHOVA, Z.; PLACER, Z.; MASEK, J.

Research of obesity in the Czechoslovak Socialist Republic. (Some recent findings). Rev.Czech.M. 7 no.1:41-48 '61.

1. Institute for Human Nutrition, Prague. Director: Doc.J.Masek.
(OBESITY statistic)

SLAVOCHOVA, Z.

STATE (in code); Given Name

(9)

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation:

Source: Brno, Vnitri Lekarstvi, Vol VII, No 8, August 1961,
pp 868-874

Data: "Obesity in Gynecological Endocrinology"

Authors:

PINSKER, P, Degrees not given, Internal Department UDL (Interni
katedra UDL), Research Institute of Experimental Therapy (Vyzkumny
ustav experimentalni terapie); Director (Reditel): Doc MUDr O Smahel
SLAVOCHOVA, Z, Degrees not given, Institute of Research on Human
Nutrition (Ustav pro vyzkum vyzivy lidu); Director (Reditel):
Doc MUDr J Masek

BULTASOVA, H, Degrees not given, Affiliation [presumed]: Institute
of Research on Human Nutrition; Director: Doc MUDr J Masek

[abbreviation not
identified]

295

SLABOCHOVA, Z.

..... (in Czech); given Name

(14)

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: Institute of Research on Human Nutrition (Ustav pro vyzkum
vyzivy lidu), Prague; Director (Reditel): Doc MUDr J Kasek

Source: Brno, Vnitri Lekarstvi, Vol VII, No 8, August 1961, pp 926-930

Date: "The Reducing Diet from the Point of View of Metabolic
Adaptation."

Authors:

SLABOCHOVA, Z
PLACER, Z

JJ2

SLABOCHOVA, Z.

Metabolic studies in obesity. III. Changes in the basal consumption
of oxygen, body surface and basal metabolism in patients on a reducing
diet. Cesk. gastroent. vyz. 15 no.1:39-43 F '61.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. MUDr. J. Masek.
(DIET REDUCING) (OXYGEN metabolism)
(BASAL METABOLISM physiol.)

SLABOCHOVA, Z.; HAVLOVA, M.; PLACER, Z.

Metabolic studies in obesity. IV. Glycemia and glycemic curves
in obesity. Cesk. gastroent. vyz. 15 no.1:44-48 F '61.

1. Ustav pro vyzkum lidu, Praha, reditel doc. MUDr. J. Masek.
(OBESITY blood) (BLOOD SUGAR chemistry)

PLACER, Z.; SLABOCHOVA, Z.

On the adipose tissue. Introduction. Cesk. gastroent. vyz. 15 no.2:
81-82 Mr '61.

l. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. MUDr. J. Masek.

(ADIPOSE TISSUE)

PLACER, Z.; SLABOCHOVA, Z.; MASEK, J.; HAVLOVA, M.; Technicka spoluprace
HRADILLOVA, L.; ROUCKOVA, O.

On the adipose tissue. I. Composition of 3 types of adipose tissue
in rats. Cesk. gastroent. vyz. 15 no.2:83-88 Mr '61.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. MUDr. J. Masek.

(ADIPOSE TISSUE chem)

PLACER, Z.; SLABOCHOVA, Z.; Technicka spoluprace ROUCKOVA, O.; HRADILLOVA, L.

On the adipose tissue. II. Changes in the composition of the adipose
tissue in starvation. Cesk. gastroent. vyz. 15 no.2:89-94 Mr '61.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. MUDr. Josef Masek.

(ADIPOSE TISSUE chem) (STARVATION exper)

SLABOKHOVA, Z. [Slabochova, Z.]; PLATSER, Z.; MASHEK, I.

Some experience in the treatment of patients with obesity.
Vop.pit. 20 no.3:12-16 My-Je '61. (MIRA 14:6)

1. Iz Instituta pitaniya, Praga, Chekhoslovakiya,
(CORPULENCE)

PLACER, Z.; SLABOCHOVA, Z.; NOVAK, M.

Postheparin esterase activity of human serum. IV. Cas.lak.cesk 100
no.15:449-454 14 Ap '61.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel doc. dr. J. Masek.

(ESTERASES blood) (HEPARIN pharmacol)

PLACER, Z.; SLABOCHOVA, Z.; MASEK, J.; technicka spoluprace: HRADILOVA, L.;
ROUCKOVA, O.

On adipose tissues. III. Composition of 3 types of adipose tissue in
rats fed diets with various food contents after fasting. Cesk.
gastroent. vyz. 15 no.3:197-202 My '61.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel. doc. MUDr. Josef
Masek. (ADIPOSE TISSUE chem) (DIETS exper)
(FASTING exper)

PLACER, Z.; SLABOCHOVA, Z.; FABRY, P.; NAVLOVA, M.; MASEK, J.; technicka
spoluprace ROUCKOVA, O.; HRADILLOVA, L.

On adipose tissues. IV. Composition of 3 types of adipose tissues in
rats after prolonged feeding diets with various food contents. Cesk.
gastroent. vyz. 15 no.3:203-208 My '61.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel doc. MUDr. Josef Masek.
(ADIPOSE TISSUE chem) (DIETS exper)

MASEK, J.; SLABOCHOVA, Z.; PLACER, Z.

Contribution to the problem of prevention and therapy of obesity.
Cas.lek.cesk 100 no.22:681-686 2 Je '61.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. MUDr. J. Masek.

(OBESITY)

VULTERINOVA, M.; DOBERSKY, P.; PIRK, F.; HRUBA, F.; SEGOVA, E.; BLAHNIKOVA, L.;
SLABOCHOVA, Z.; PLACER, Z.

Changes in the nutritional state of patients after gastrectomy; diagnosis,
prevention and therapy. Rev. czech. med. 8 no.4:276-284 '62.

1. Institute of Human Nutrition, Prague; Director: Prof. J. Masek, M.D.
(POSTGASTRECTOMY SYNDROMES)

PLACER, Z.; RATH, R.; SLABOCHOVA, Z.; technicka spoluprace HRADILLOVA, L.

Body water space. I. Determination of extracellular fluids with the
aid of rhodanide (NaSCN). Cesk. gastroent. 16 no.1:35-40 Ja '62.

1. Ustav pro vyzkum vyzivy lidu, Praha, red. doc. MUDr. J. Masek, DrSc.
(THIOCYANATES) (BODY FLUIDS)

PLACER, Z.; SEDLACEK, B.; ROUBAL, Z.; SLABOCHOVA, Z.; HROMADKOVA, V.

The problem of fats from the biochemical viewpoint. Cesk. gastroent.
vyz. 16 no.3/4:171-177 Ap '62.

l. Ustav pro vyzkum výzivy lidu v Praze, reditel doc. MUDr. J. Masek,
DrSc.

(NUTRITION)

(ADIPOSE TISSUE)

(LIPID METABOLISM)

MASEK, J.; OSANCOVA, K.; SLABOCHOVA, Z.; HEJDA, S.; HATLE, J.

Epidemiology and pathogenesis of obesity. Cesk. gastroent. vyz.
16 no.3/4:223-229 Ap '62.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel doc. MUDr. J. Masek,
DrSc.

(OBESITY)

(NUTRITION)

VULTERINOVA, M.; DOBERSKY, P.; PIRK, F.; HRUBA, F.; SEGOVA, E.; BLAHNIKOVA, L.;
SLABOCHOVA, Z.; PLACER, Z.

Changes of the nutritional status of gastrectomized patients, their
diagnosis, prevention and therapy. Cesk. gastroent. vyz. 16 no.3/4:
258-265 Ap '62.

l. Ustav pro vyzkum vyzivy lidu v Praze, reditel doc. MUDr. J. Masek,
DrSc.

(GASTRECTOMY) (NUTRITION DISORDERS)

SLABOCHOVA, Z.; MASEK, J.; PLACER, Z.; RATH, R.

Contribution to metabolic studies in obese subjects. Bratisl. Lek.
Listy 42 no.7:402-408 '62.

1. Z Ustavu pro vyzkum vyzivy lidu v Praze, reditel doc. MUDr.
J. Masek, Dr.Sc.
(OBESITY) (LIPID METABOLISM)

MASEK, Josef; SLABOCHOVA, Zdenka; PLACER, Zdenek

Some aspects of fat diets in the metabolism of normal and obese subjects. Cas. lek. cesk. 101 no.32/33:977-980 17 Ag '62.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel prof. dr. J. Masek,
DrSc.

(LIPIDS) (NUTRITION) (LIPID METABOLISM)
(OBESITY)

SLABOCHOVA, Z.; RATH, R.; PLACER, Z.

Metabolic studies in obesity. V. Blood sugar curve after 2
glucose loads. Cesk. gastroent. vyz. 17 no.1:37-41 Ja '63.

1, Ustav pro vyzkum vyzivy lidu v Praze, reditel prof. dr.
J. Masek, DrSc.
(OBESITY) (GLUCOSE TOLERANCE TEST)
(INSULIN) (AGING)

RATH, R.; SLABOCHOVA, Z.; PLACER, Z.

Metabolic studies in obesity. V. Effect of adrenalin in normal weight and obese subjects. Cesk. gastroent. vyz. 17 no.7:422-429 N°63

1. Ustav pro vyzkum vyzivy lidu v Praze; reditel prof. dr. J. Masek, DrSc.

SONKA, J.; PETRASEK, J.; ZBIRKOVA, A.; SLABOCHOVA, Z.

Effect of reducing regimens on the excretion of 3-methoxy-4-hydroxymandelic acid (vanillylmandelic acid). Cesk. gastroent. vyz. 17 no.7:430-434 N '63.

1. Laborator pro endokrinologii a metabolismus a III. interni klinika fakulty vseobecneho lekarstvi Karlovy University v Praze; Katedra telesne vychovy Karlovy University v Praze, a Ustav pro vyzkum vyzivy lidu v Praze.

SLABOCHOVÁ, Z. [mládež, Z.]; VESELKOVÁ, A.; SLABOKHOVÁ, Z. [Slabochova, Z.]

Nature of the inhibition of fatty acid oxidation in the animal organism. Vop. pit. 23 no.6:30-33 N-D '64.

(MIRA 18:6)
1. Institut pitaniya (dir. - prof. I. Mashek [Masek, I.]), Praga,
Chekhoslavakiya.

SLABOCHOVA, Z.; FANT, R.; PLACER, Z.; MASEK, J.

Effect of thyroglobulin in the treatment of obesity. Cas. Lek.
Cesk. 103 no.17:458-462 Ap 24 '64.

1. Ustav pro vyzkum vyzivy lidu, Praha (ředitel prof. dr. J.
Masek, DrSc.).

RATH, R.; PLACER, Z.; SLABOCHOVA, Z.; Technicka spoluprace: HRADILOVA, L.;
MUNCLINGEROVÁ, M.; Statisticka spoluprace: ZVOLANKOVA, K., inz.

Body water space. Part 8. Cesk. gastroent. vyz. 19 no.6:335-339
S '65.

1. Ustav pro vyzkum vyzivy lidu v Praze (reditel prof. dr.
J. Masek, DrSc.).

L 40337-66 EWP(j)/EWT(m)/T IJP(c) RM
ACC NR. AR6007521 (A)

SOURCE CODE: UR/0419/65/0007002/0015/0015

AUTHOR: Navumava, S. F.; Slabodchikava, L. K.; Yerafeyev, B. V.

24

B

ORG: None

TITLE: Epoxy resin based on polycyclohexadiene-1,3

SOURCE: AN BSSR. Vestsi. Seryya khimichnykh navuk, no. 2, 1965, 10-15

TOPIC TAGS: epoxide, epoxy resin , hydrogen peroxide, cyclic group, diene synthesis, olefin

ABSTRACT: The authors study epoxidation of polycyclohexadiene-1,3 in a mixture of hydrogen peroxide and formic acid as a function of concentration of the epoxidizing reagents, the order in which they are added and the time and temperature of epoxidation. It is found that epoxidation under mild conditions produces an epoxy resin with an epoxide oxygen concentration of 6-9%. Optimum conditions for using hydrogen peroxide and formic acid in epoxidation of polycyclohexadiene-1,3 are as follows: A formic acid concentration of 19-28% with respect to hydrogen peroxide; a hydrogen peroxide concentration of 35-70% with respect to the polycyclohexadiene-1,3 to be epoxidized; a temperature of 40°C and an epoxidation time of 5 hours. Orig. art. has: 7 tables.

SUB-CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003

Card 1/1

PETROV, Yakov Petrovich; SLABODKIN, A.Ya., dots., kand. tekhn.
nauk, retsenzent; SIDOROV, A.P., dots., kand. tekhn.
nauk, retsenzent; PUZANOV, N.F., st. nauchn. sotr.,
otv. red.; VASIL'YEVA, N.V., red.

[Amphibious units for lumber floating; textbook for
students of the Faculty of Woodworking and Forest
Engineering] Vezdekhodnye agregaty-amfibii dlia splava;
uchebnoe posobie dlia studentov lesomekhanicheskogo i
lesoinzhernogo fakul'tetov. Leningrad, Vses. zaochnyi
lesotekhn. in-t, 1964. 61 p. (MIRA 18:5)

IOFFE, Yuliy Rafailovich; KUPTSOV, Ivan Pavlovich; ORLOV, M.M., inzh.,
red.; SLABODKINA, G.N., red.; LEBEDEVA, L.V., tekhn. red.

[Design and construction of large thermal electric power plants
of precast reinforced concrete] Proektirovaniye i stroitel'stvo
moshchrykh teplovых elektrostantsii iz sbornogo zhelezobetona.
Moskva, Orgenergostroi, 1962. 77 p.

(MIRA 15:10)

(Electric power plants)
(Precast concrete construction)

1. SHAF'DYAN, V.
2. USSR (600)
4. Electric Ccils
7. Transformer instead of choke coil. Radio No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SLABODYALYUK, M.I.

Diagnostic significance of morphological methods of investigation in influenza. Vop.virus. 4 no.3:336-340 My-Je '59.
(MIRA 12:8)

1. Institut infektsionnykh bolezney AMN SSSR, Kivev.
(INFLUENZA, diagnosis,
cytoscopic technics (Rus))

SLABON M.

12846

545.37 : 546.471.31.04 : 548.582.228.04 : 546.722.475.04

Kamecki J., Slabon M. Amperometric Titration of some Heavy Metal Salt Solutions by Sodium Hydroxide with the Aid of the Rotating Platinum Electrode.

"Miarzczkowanie amperometryczne roztworów niektórych metali ciękkich roztworem wodorotlenku sodowego z zastosowaniem platynowej elektrody wirującej". Roczniki Chemii (PAN), No. 1, 1953, pp. 107-114, 5 figs, 3 tabs.

By amperometric titration of solutions of CuSO_4 , $\text{Fe}(\text{NO}_3)_3$, and ZnCl_2 with 1 N NaOH, satisfactory results were obtained (relative error less than 1 per cent). Particularly good results were achieved when the platinum electrode was connected with the positive pole of the accumulator. The titrations can be performed either by calculating the ratio of current intensity to the quantity of ml. of NaOH solution (drawing a curve of this ratio, which will show the titration point at the break of the curve) or up to the "leap" of the microammeter handle. Titration of lead nitrate requires further tests in changed conditions.

POLAND / Cultivated Plants. Grains.

M-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 2493S

Author : Slabonski, A.
Inst : The Institute of Livestock Raising and Plant Ac-
climatization (Gorzov)
Title : Investigation of the Stages of Vernalization of
Grain Crops and Their Significance in the Culti-
vation and Selection of Plants.

Orig Pub: Acta agrobot., 1956, 4, 45-85 (Polish, res. Russ.,
Eng.)

Abstract: At the Institute of Livestock Raising and Plant
Acclimatization (Gorzov) in 1951-1953 the duration
of the stages of vernalization was determined in
54 varieties of wheat, 5 varieties of barley and
18 varieties of rye. All the winter wheat varie-
ties were divided into 6 groups according to the

Card 1/3

12

POLAND / Cultivated Plants. Grains.

M-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24939

Abstract: duration of the stages of vernalization, the rye and barley varieties into 3 groups. The effect of increased temperature (up to 20-35°) on the vernalization process was studied. Plant development was retarded by keeping the sprouting seeds being vernalized at higher temperatures for 3-5 days. The winter barley yields from the vernalized seeds planted in spring either equalled or surpassed the summer barley harvests; the yields of winter wheat planted in the spring from the vernalized seed was ordinarily lower than the summer wheat output. The method of seed vernalization was used in selection to cross the winter and summer and early and late varieties, to study the resistance of various winter wheat varieties to stinking smut; to obtain two generations of winter in the course of 1 year,

Card 2/3

POLAND / Cultivated Plants. Grains. Legumes. Tropical M-1
Cereals.

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6208

Author : Slabonski, A.

Inst : Not given

Title : Selection of Wheat With High Quality Grain

Orig Pub : Hodowla rosl., aklimat. i nasienn., 1957, 1,
No 4, 498-508

Abstract : No abstract given

Card 1/1

L 39987-65 EMG(a)-2/EMG(c)/EMG(j)/EMG(r)/EMG(v)/EMT(1)/FS(v)-3 Pe..5 DD/GS

ACCESSION NR: AT5005625

S/0000/64/000/000/0092/0107

36

0+1

AUTHOR: Slabospitskiy, A. A.

TITLE: Injuries of the skin induced by microwaves ✓

SOURCE: AN UkrSSR. Institut fiziologii. Biologicheskoye deystviye ul'trazvuka i sverkhvysokochastotnykh elektromagnitnykh kolebaniy (Biological effect of ultrasound and super high frequency electromagnetic oscillations). Kiev, Naukova dumka, 1964, 92-107

TOPIC TAGS: microwave-radiation, skin injury, necrosis, skin temperature, skin cooling, skin protection, radiation damage

ABSTRACT: Mircowave-induced injuries were studied in 43 white rats and 6 rabbits irradiated with microwaves by the contact method to determine the character of the cutaneous injuries caused by the local effect of microwaves of a given intensity, as well as those processes which precede the injury and determine its development. Studies covered the clinical picture of the injured skin and disturbances in the function and structure of nerve and blood vessels of the skin during and after irradiation. Fifteen controls were used to determine the possibility of microwave skin injury under conditions which exclude heat during irradiation (cooling with

Card 1/2

L 39987-65

ACCESSION NR: AT5005625

O

ethylchloride). Skin temperatures were measured constantly. The rats were irradiated on the shaved body, the rabbits on the ear. Under these conditions, 100% necrosis was obtained in the test rats one week after the local effect of 3-cm-long microwaves, 0.5 watt/cm^2 , applied for 3 minutes per day, which raised the skin temperature to $55 \pm 3 \text{ C}$. The skin temperature rose exponentially, which points towards the purely physical nature of this effect, uncompensated by any protective forces of the animal organism. For a skin 1.5-2 mm in thickness, all the skin layers were almost identically heated. Initial damage to the skin under these conditions consisted of focal desinnervation and persistent stasis at the irradiated site. Further changes were characterized by necrobiotic processes progressing towards mummification. No pathologic changes were seen in the controls protected from heat (skin temperature maintained at 32-35C). The pathologic processes are thus caused solely by the energy absorbed by the skin. They start from a focus and develop a type of dry necrosis determined by the character of heat distribution, heating gradient, duration of effect and the animal species. Orig. art. has: 4 figures.

ASSOCIATION: None
SUBMITTED: 15Sep64
NO REF SOV: 016

ENCL: 00
OTHER: 012

SUB CODE: LS

Card 2/2 myB

L 38952-65 EWG(j)/EWG(r)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)-2/EWG(c) Pe-5 DD
ACCESSION NR: AP5010369 UR/0238/65/011/002/0225/0231
34

AUTHOR: Slabospits'kyy, O. O. (Slabospitskiy, A. A.)

TITLE: On the mechanism of action of microwaves on the skin
2

SOURCE: Fiziologichnyy zhurnal, v. 11, no. 2, 1965, 225-231

TOPIC TAGS: microwave, biological effect, skin, rat, rabbit

ABSTRACT: Albino rats and rabbits were exposed to 3-cm microwaves with power flux density 0.1-0.5 w/cm². The pulsed system operated at 575 imp/sec with a pulse width of 1 μ sec. The power was controlled by a VIM-1 wattmeter. Exposure was such that the irradiated portion of the skin did not heat up. The following indices of the action of microwaves on the skin were studied: temperature of the irradiated portion of the skin (+0.2C accuracy), peripheral circulation, and changes in neural structures of the skin. The immediate reaction of the skin to microwaves and subsequent processes were studied. It was established that injury to the skin by microwaves took place only when the skin heated up to 55C. Skin injury took place in two stages. The first stage was characterized by immediate response to microwaves in the form of energy absorption which caused circulatory stoppage and damaged neural elements, inhibiting their function. The second stage was

Card 1/2

L 38952-65

ACCESSION NR: AP5010369

characterized by severe circulatory damage which led to necrosis of the irradiated portion of the skin and complete denervation of the irradiated portion of the skin due to the destructive action of microwaves on neural elements. Orig. art. has 1 figure.

[CD]

ASSOCIATION: Laboratoriya biofizyky Instytutu fiziolohiyi im. O. O. Bogomol'tsya Akademiyi nauk URSR, Kiev (Laboratory of Biophysics, Institute of Physiology, Academy of Sciences, URSR)

SUBMITTED: 09Sep64

ENCL: 00

SUB CODE: LS, EC

NO REF SOV: 018

OTHER: 011

ATD PRESS: 3229

me
Card 2/2

23562-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m) IJF(c) GS/AT

ACC NR: AT6008847

SOURCE CODE: UR/0000/65/000/000/0089/0104

AUTHOR: Slabospitskiy, A. P. (Deceased)

74
B+1

ORG: none

TITLE: Investigation of a nonadiabatic magnetic trap

SOURCE: AN UkrSSR. Magnitnyye lovushki (Magnetic traps). Kiev, Naukova dumka, 1965, 89-104

TOPIC TAGS: magnetic trap, nonadiabatic process, charged particle, plasma physics, magnetic mirror, magnetic field

ABSTRACT: The author studies a magnetic system where charged particles are held in resonance with a spatially periodic magnetic field by reducing the intensity of the principal magnetic field with respect to the spatially periodic system in synchronization with a reduction in the longitudinal component of the velocity of the charged particles. It is shown that a group of particles appears after reflection from the second magnetic mirror and that these particles immediately escape from the magnetic trap. This group of charged particles has a decisive effect on the measured current. The number of electrons formed during ionization of the residual gas was determined. Since the diffusion of slow electrons across the magnetic field is low, all ionization electrons pass through the magnetic mirrors in steady state conditions. The electron current generated during ionization reduced to the injection current gives the number of secondary ionization electrons produced in the trap by a single fast electron

Card 1/3

L 23562-66

ACC NR: AT6008847

$n = \Delta I / I_0$. The average path traversed by fast electrons in a magnetic trap may be found from the formula

$$\frac{n}{S} = \frac{\Delta I}{I_0 S_0 p}$$

where n/S is the average path of a fast electron in the trap; ΔI is the current of electrons produced within the trap; I_0 is the injection current without a modulating magnetic field; S_0 is the relative ionization of electrons for a given energy in air; p is the residual gas pressure in mm Hg. The installation used for measuring the average path traversed by a charged particle in a magnetic trap is shown in the figure where K_1 , K_2 and K_4 are electron current collectors, K_3 is the ion probe and C_1 , C_2 , C_3 and C_4 are grids. The curve for the average path at resonance of a charged particle in the magnetic trap as a function of pressure shows a sharp maximum at $2.5 \cdot 10^{-6}$ mm Hg which is the low pressure limit for the proposed method due to losses of fast particles at the walls.

Data on the average path of the fast electrons in the trap and their average longitudinal component of velocity were used for estimating the time which the charged particles were held in the magnetic trap. These estimates give a value

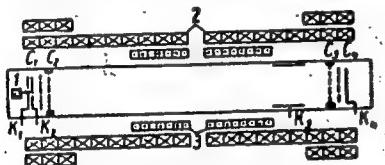


Diagram of the experimental setup:

1--electron gun; 2--coils for the fundamental magnetic field; 3--coils for the modulating magnetic field.

Card 2/3

L 23562-66

ACC NR: AT6008847

of 16 usec for a distance between mirrors of 300 cm and 80 reflections between mirrors. Experimental results showed that the majority of the particles passing through the first (injection) mirror are electrons. The number of particles which pass through the injection mirror depends on pressure. A curve is given showing the ratio of streams passing through the first and second mirrors as a function of residual gas pressure. The fraction of particles escaping from the trap through the injection mirror also increases with injection current. The behavior of the charged particles after the first reflection from the magnetic mirror was studied by using a screen with a radial slit which was coated with a phosphorescent material on two sides. The primary beam was passed through the slit and the beam reflected from the magnetic mirror was observed on the screen. A cylindrical beam of charged particles appears at the input of the spatially periodic magnetic field after reflection from the second mirror. The reflection areas are diffused, especially on the injection mirror side. A small trap is formed with a distance of about 70 cm between the ends of the reflection areas. The magnetic field of the reflection area on the injection mirror side is smaller than that of the reflection area on the second mirror. There are three groups of particles which interact in different ways with the spatially periodic magnetic field: one group increases its own transverse component of energy, a second changes it weakly and the third converts the transverse energy component to a longitudinal component. Orig. art. has: 9 figures, 2 formulas.

SUB CODE: 20/ SUBM DATE: 200ct65/ ORIG REF: 012/ OTH REF: 001

Card 3/3 FV

KAMENETSKIY, V.A., inzh.; SLABOSPITSKIY, I.A., inzh.; CHEKRIZOV, L.G., inzh.

Results of testing tractors with automatic friction transmissions.
Trakt. i sel'khozmash. 33 no.5:11-14 My '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva (for Kamenetskiy). 2. Kubanskiy gosudarstvennyy
nauchno-issledovatel'skiy institut i sel'skokhozyaystvennykh mashin
(for Slabospitskiy, Chekrizov).

SLABOSPITSKIY, R.P.

AUTHOR: FOGEL', Ya.M., KRUPNIK, L.I., SLABOSPITSKIY, R.P. PA - 3551
TITLE: Negative Hydrogen Ion Formation by Passage of Positive Hydrogen
Ions through a Supersonic Oil Vapour Stream. (Obrazovaniye
otritsatel'nykh ionov vodoroda pri prokhozhdenii polozhitel'nykh
ionov vodoroda cherez sverkhzvukovyyu struyu parov masel, Russian)
PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 5, pp 981 - 987 (U.S.S.R.)
ABSTRACT: With reference to a previous work (Zhurnal Tekhn. Fiz., 1956,
p 1208) several experiments are described in the present paper
which were carried out with a view of realizing a vapor jet target.
Oil, which has a low vapor viscosity, was used as working material.
For purposes of comparison with a vapor-mercury target experiments
were carried out for the determination of the coefficient of the
transformation $H_1^+ \rightarrow H_1^-$ on which occasion various oils were used
as target substance. The supersonic outflow of oil vapors from a
Laval nozzle was investigated in a system, the section of which is
shown here. The results obtained by the investigations make it
possible to investigate the transformation of positive hydrogen
ions into negative ones in the ultrasonic jet of the oil vapors.
Three groups of H_1^- -ions were observed: 1) such with an energy
that corresponded to the full potential drop, 2) and 3) with an
energy that corresponded to one half and one third of this value
respectively. The experiments showed that a reliable vapor jet

Card 1/2

SLABOSPITSKIY, R.P.

AUTHOR: FOGEL', Ya.M., KRUPNIK, L.I., KOVAL', A.G., PA - 3552
SLABOSPITSKIY, R.P.

TITLE: Composition of Equilibrium Beam, Formed by Passage of Single Positive Oxygen Ions through the Gas Targets. (Sostav ravnovesnogo puchka, obrazuyushchegosya pri prokhozdenii odnozaryadnykh polozhitel'nykh ionov kisloroda cherez gazovyye misheni, Russian)

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 5, pp 988 - 996 (U.S.S.R.)

ABSTRACT: The tests were carried out in order, by means of a recharge of positive ions, to obtain a bundle of negative oxygen ions. For this purpose the composition of an equilibrium oxygen bundle with an energy of 12.3 - 46.2 keV, which is formed during the passage of positive oxygen ions with a charge through a flowing gas target filled with Ne-, A-, H₂-, N₂-, and O₂ gases, is investigated. There follows the description of the apparatus and of the measuring method. The quantities f⁰, f⁺, f⁻ (relative content of positive and negative ions with a charge in the bundle) for an equilibrium oxygen bundle with an energy in the above interval in the above mentioned gases were investigated. It is shown that in the energy interval investigated no great dependence of bundle composition on energy could be observed. However, the composition of the bundle depends in a high degree on the nature of the gas by which the target is filled. There is a particularly high content

Card 1/2

AUTHOR: FOGEL, YA.M., ANKUDINOV, V.A., SLABOSPITSKY, R.P. PA ~ 2956
TITLE: Loss of Two Electrons in A Single Collision between Negative Hydrogen
Ions and Molecules of the Gas. (Potera dvukh elektronov pri
odnokratnykh stolknoveniyakh otritsatel'nykh ionov vodoroda s mole-
kulami gasov, Russian)
PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 3, pp 453-462
(U.S.S.R.)
Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: The cross sections of these losses in the case of energies of hydrogen ions of from 5 to 40 keV were measured on the occasion of collisions with He-, Ne-, A-, Kr-, Xe- atoms, and H₂-, N₂-, O₂- molecules; the experimental system is described in detail. In the interval examined the cross sections in Ne, A, Xe, N₂, O₂ increase monotonously with the energy; with Kr they increase up to 20.6 keV, after which they remain constant; in the case of He a maximum exists at 20 keV, and with H₂ the cross section remains constant. These results are compared with the cross sections of the loss of two electrons in the case of heavy negative ions, of the loss of an electron by the same ions as those measured here; the justification of neglecting two-electron losses when measuring one-electron

Card 1/2

S/194/62/000/001/045/066
D201/D305

AUTHORS: Fogel^c, Ya. M., Slabospitskiy, R. P. and Guzhovskiy,
I. T.

TITLE: Formation of negative ions of helium, carbon, oxygen
and chlorine in passing of positive ions through an
ultrasonic stream of mercury vapor

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
no. 1, 1962, 62, abstract 1Zh437 (V sb. Elektrostat.
generatory, M., Atomizdat, 1959, 32-45)

TEXT: The transformation of positive He, C₂, O₂ and Cl ions into
negative ions in their passing through a mercury vapor target is
investigated and the possibility of obtaining a source of heavy
negative ions for the charge-change generator is explained. An HF-
source was used for obtaining a beam of positive ions. The sorting
of ions according to their energy was achieved by means of the
electric field of a plane condenser, placed in front of the input
to a magnetic analyzer. The results of investigation into the de-

Card 1/2

or primary
mining the beam thick-
put of a beam of negative ions, as obtained by means
tation. / Abstracter's note: Complete transla- ✓

APPROVED FOR RELEASE: 08/24/2000 CIA-RDP86-00513R001651220015-8"

Card 2/2

24.2120, 24.6000, 24.7400

77331
SOV/57-30-1-10/13

AUTHORS: Fogel', Ya. M., Slabospitskiy, R. P., Rasrepin, A. B.

TITLE: Charged Particle Emission From Metal Surfaces During Positive Ion Bombardment

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 50, Nr 1,
pp 63-73 (USSR)

ABSTRACT: Introduction: In previous work of this kind researchers were able to measure only the sum of the K^- coefficient of secondary negative ion emission and R , the coefficient of reflection of incoming ions. In the 10 kev incoming proton energy region one cannot give any reasonable meaning to K^- due to a steep rise in R . To date there are no data about K^+ , the coefficient of secondary positive ion emission, in scientific literature. In the present investigation the authors measured K^- and K^+ coefficients for Mo bombarded by

Card 1/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

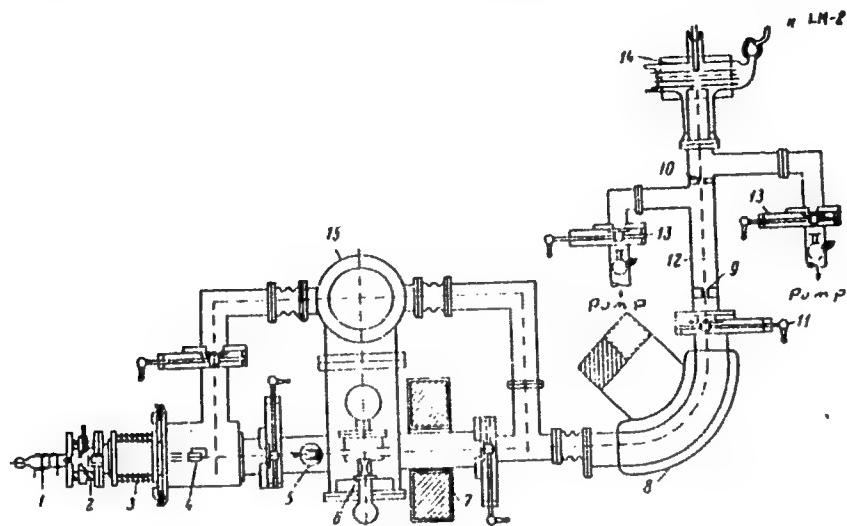
77331
SOV/57-30-1-10/18

H^+ , He^+ , Ne^+ , Ar^+ , Kr^+ , and O^+ , and for Ta, W, Cu, and Fe bombarded by H^+ , Ne^+ , and Ar^+ . Incoming ion energy varied between 10 and 40 kev. The method also allowed the measurements of the coefficient γ of the secondary electron emission, and of R.. The authors report these values in this paper, too. Description of the experimental set-up: Figure 2 represents the diagram of the experimental set-up. The ion gun consists of a high-frequency ion source 1, a symmetrical three-electrode lens 2, and an accelerating tube 3. Two crossed plate condensers 4, adjust the direction of the beam, and the Faraday cage 5, measures the ion yield of the gun. Next, the ions go through the mercury vapor target 6, used to generate negative hydrogen ions by a method described by Fogel' and others (ZhTF, XXVI, 1208, 1956). Negative hydrogen ions are used to compare the coefficients of secondary ion emission due to positive and negative ions of the same material. The magnetic lens 7, supplies an additional focusing while the mass-monochromator 8,

Card 2/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18



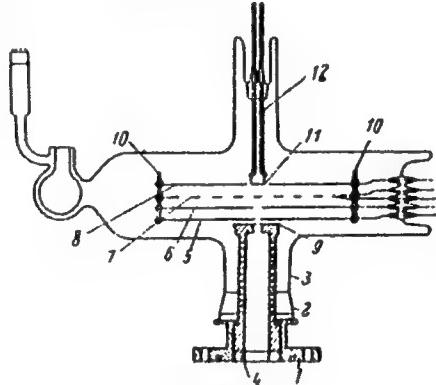
Card 3/17

Fig. 2.

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

supplies monoenergetic ions of unique mass.
Channels 9 and 10 ($2 \times 4 \times 20$, and $2 \times 4 \times 9$ mm,
respectively) at a mutual distance of 370 mm,
constitute the collimator 12, leading to the measuring
chamber 14, represented on Fig. 3.



Card 4/17

Fig. 3.

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/13

The glass container 3, houses the screen 5, preventing the scattered incoming ions from reaching the collector 6, the grid 7, the target screen 8, and the target 11. The glass is soldered to a fernico ring 2, which is soldered further to the metallic flange 1, connected to the collimator. All electrodes, except the target, are mounted on two quartz plates 10, representing a frame fixed inside the container walls. Target consists of a metal strip 0.1 mm thick, mounted on two molybdenum leads 5 mm in diameter. A magnetic screen 4, of iron shields the incoming ion beam. Transparency of the grid equals 97%. Target with screen, grid, collector, and screen are separated 10 mm from one another. The chamber is inside a magnetic field of approximately 500 Oersteds, parallel to the planes of the electrodes. The whole assembly is evacuated by means of the MM-1000 diffusion pump 15, while additional pumping of the collimator and measuring chamber is done by means of two MM-40 diffusion pumps. During the measurements the pressure in the chamber was kept

Card 5/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

at 2 to $3 \cdot 10^{-7}$ mm Hg. Incoming beam current

was usually of the order of 10^{-9} amp. Currents of the secondary and reflected ions on the collector were measured using a string electrometer with a sensitivity of $6.7 \cdot 10^{-12}$ amp/div. Methods of measurements: Consider the relation between the collector current I_c and the potential difference $V_{t.g.}$ between the target and the grid for a constant potential $V_{g.c.}$ between the grid and collector, accelerating positive ions from the grid toward the collector. For some value of $V_{t.g.}$ the collector collects all secondary and reflected primary ions. If $E_0^- \max < e(V_{g.c.} + V_{t.c.})$, where $E_0^- \max$ is the maximum initial energy of the secondary ions, they cannot reach the collector, and, therefore, $I_c = I_{sec}^+ + I_{refl}^+$. Changing the sign of $V_{t.g.}$ one slows the secondary ions down, and accelerates the negative ions. Reflected ions always reach

Card 6/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10-/18

the collector since the primary beam has 10 kev or more of energy. In a like manner, changing electrode potentials the authors define $I_c = I_{refl}^+$; $I_c'' = I_{sec} - I_{refl}^+$. The curve $I_c = f(V_{t.g.})$ at constant $V_{g.c.}$ must have three plateau regions as seen in Fig. 1.

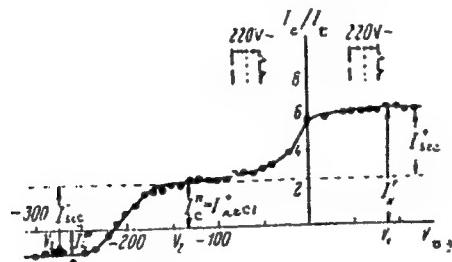


Fig. 1.

Card 7/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

The coefficients are then given by

$$K^- = \frac{I_c'' + I_c'''}{I_t'' + I_c'' - I_c''}, \quad (1)$$

$$K^+ = \frac{I_c'}{I_c' + I_c''}, \quad (2)$$

$$R = \frac{I_c''}{I_t'' + I_c''}. \quad (3)$$

where I_t denotes the target current. Similarly, the authors obtain the coefficient γ , taking into account the effects of the magnetic field. This field is in general used to prevent secondary electrons from reaching the collector. Results of measurements: Targets are always prepared in the same

Card 8/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

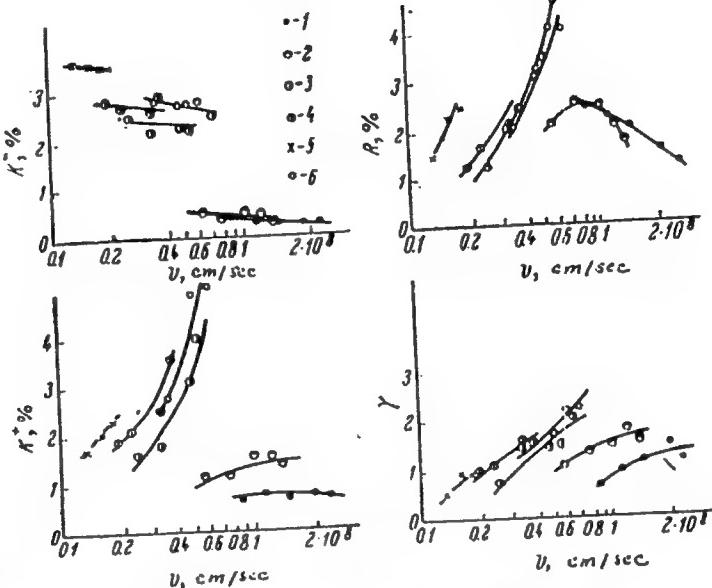
Card 9/17

way to eliminate the influence of surface variations. They are etched first in diluted sulfuric acid, then washed in distilled water and dried in an oven; next, they are heated in a $2 \text{ to } 3 \cdot 10^{-7}$ mm Hg vacuum up to 2000°C for Mo, Ta, and W; and up to 900°C for Cu and Fe during 30 to 40 min; finally, they are bombarded with the ion beam for one hour. After such a treatment the coefficients stay constant over a whole working day (6 to 8 hours) and are fully reproducible. Results of the measurements of coefficients for a number of ions are on Fig. 4. The results of comparison of coefficients during an H^+ and H^- bombardment of the same Mo surface are given in Table A. Ion energy was 22 kev. The authors assume that the K^- variation is due to the $\text{H}^- \rightarrow \text{H}^+$ conversion of the incoming hydrogen ion on the surface. The γ coefficient

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

Fig. 4. (1) H^+ ;
(2) He^+ ; (3) Ne^+ ;
(4) Ar^+ ; (5) Kr^+ ;
(6) O^+ .



Card 10/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

Table A

Coefficient	Ion	
	H ⁻	H ⁺
K ⁻ , %	1.14	0.71
K ⁺ , %	0.45	0.44
R, %	2.03	1.56
T	3.52	1.38

Card 11/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

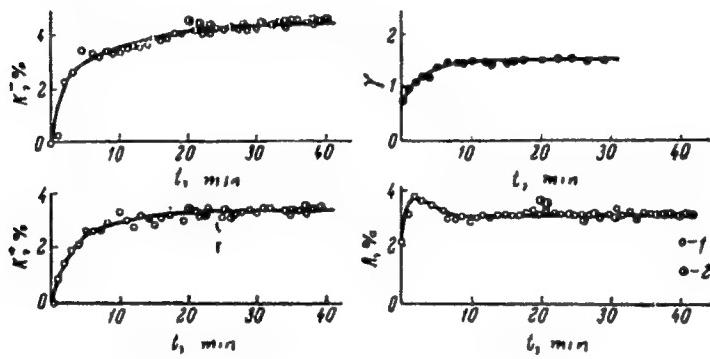
variation has been observed already by Zandberg (ZhTF, XXV, 1386, 1955) and Dukel'ckiy (ZhTF, 19, 731, 1949). To investigate the influence of adsorbed gases the authors kept a M_o target at 1800° C for 20 minutes and measured the values of coefficients as function of time. Results are on Fig. 5. The beam consisted of 12 kev Ar^+ ions. The authors explain the curves by assuming that the removal of the adsorbed gas by baking reduces to zero the emission of secondary ions. Since, according to Hagstrum (see references) it takes only a few seconds at 10^{-7} mm Hg to build a monomolecular layer on an outgassed sample, and it took some 20 minutes to bring the K^- and K^+ coefficients to their original values, the authors concluded that many layers of adsorbed gas must be responsible for the secondary emission. The γ coefficient behavior is in agreement with results of Waters (see references)

Card 12/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

Fig. 5. (1) beam sent on the target 30 seconds
after the end of heating; (2) beam sent on the
target 20 minutes after the end of heating.



Card 13/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

and Brunnee (Zs. f. Phys., 147, 161, 1957). The authors investigated the influence of the target temperatures on the coefficients. Although they found regular temperature variations due probably to different thickness of adsorbed gas layers, the process did not lead to the same values during the heating and then cooling-back, and the authors have no explanation for these effects. Hydrogen, at approximately 10^{-4} mm Hg was also brought in contact with the target at 1500° C, to investigate the influence of the nature of adsorbed gas on the coefficients. Figure 7 shows distinct changes in their values. The target metals had considerable influence on the coefficients, as seen on Fig. 8. The authors will perform a more detailed evaluation of the present data after performing the next stage of planned experiments which include the investigation of the composition of the secondary ionic emission by means of a mass spectrometer, the determination of their energy spectrum, and the

Card 14/17

Charged Particle Emission From Metal
Surfaces During Positive Ion Bombardment

77331
SOV/57-30-1-10/18

influence of the outgassing process and target temperature on each type of ions, separately. Professor A. K. Val'ter showed interest in this work. There are 8 figures; and 17 references, 8 Soviet, 1 German, 4 U.K., 4 U.S. The most recent U.K. and U.S. references are: R. C. Bradley, J. Appl. Phys., 30, 1 (1959); P. M. Waters, Phys. Rev., 111, 1053 (1958); R. E. Honig, J. Appl. Phys., 29, 549 (1958); H. D. Hangstrum, Rev. Sci. Insr., 24, 1122 (1953); F. L. Arnot, C. Becket, Proc. Roy. Soc., A168, 103 (1938).

ASSOCIATION: Khar'kov State University imeni A. M. Gor'kii
(Khar'kovskiy gosudarstvennyy universitet imeni
A. M. Gor'kogo)

SUBMITTED: June 15, 1959

Card 15/17

FOGEL¹, Ya.M., SLABOSPITSKIY, R.P., KARNAUKHOV, I.M.

Mass-spectrometric investigation of the secondary positive and
negative ion emission, arising in the bombardment of the sur-
face of Mo by positive ions. Zhur. tekhn. fiz. 30 no.7:824-834
(MIRA 13:8)
Jl '60.

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
(Molybdenum) (Mass spectrometry) (Ions)

SLABOSPITSKIY, R. P. Cand Phys-Math Sci -- "Study of secondary ion emission
in the bombardment of metals with positive ions." Len, 1961. (Acad Sci USSR.
Len Phys-Tech Inst). (KL, 4-61, 185)

L 12959-63
ESD-3/SSD

EPF(c)/ENG(k)/EMP(q)/EWT(m)/EWT(1)/BDS/ES(w)-2 AFFTC/ASD/
Pz-4/Pab-4 IJP(C)/AT/JD S/109/63/008/04/020/030

AUTHORS:

Fogel', Ya. M., Slabospitskiy, R. P., Slavnyy, A. S.

TITLE:

Mass-spectrometric investigation of secondary ion emission in the bombardment of platinum by ions of argon

PERIODICAL:

Radiotekhnika i elektronika, v. 8, no. 4, 1963, 684-690

TEXT: This paper was the subject of a report to the 10th Conference on Cathode Electronics held at Tashkent in November 1961. It describes the results of an investigation of the mass-spectrum composition of a secondary positive and negative ion emission which arises when a platinum surface is bombarded with Ar⁺ ions having an energy of 22 kev. Also described are the changes in the mass spectrum of the secondary emission arising as a result of the action of gases N₂, O₂, NH₃, NO and H₂O upon a previously de-gassed surface of platinum. The relationship between the number of secondary ions knocked off and the temperature of the target is also investigated. The authors feel there is a "profound relationship" between the processes occurring on the surface of the metal and the behavior of the mass spectrum of the secondary ion emission. They state it would be desirable to conduct a simultaneous investigation of the mass spectrum of the secondary ion emission

Card 1/2

L 12959-63

S/109/63/008/004/020/030

Mass-spectrometric investigation.....

and the mass spectrum of the gas phase, since in some cases a process of desorption of particles in the gas phase occurs, which alters the composition of the latter.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kovo (Kharkov State University imeni A. M. Gor'kiy)

SUBMITTED: 26 April 1962: after revision: 21 September 1962

Card 2/2

V, O. I.; ZINCHENKO, I. S.; KARNAUKHOV, I. M.; SLABOSPITSKIY, R. P.; TARANOV,

"A Source of Polarized Deuterons."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

KhFTI (Ukrainian Physico Technical Inst)

I 7237-66 EWT(1)/EPA(sp)-2/EPP(c)/EPA(w)-2 AT
ACC NR: AP5025906 SOURCE CODE: UR/0057/65/035/010/1897/1901

AUTHOR: Yekhichev, O.I.; Zinchenko, G.N.; Zinchenko, N.S.; Karnaukhov, I.M.; Slabospitskiy, R.P. 79
44, 55 44, 55 44, 55 44, 55

ORG: none 86
44, 55 B

TITLE: Mass spectrometric investigation of a source of positive ions operating at a low gas pressure

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1897-1901

TOPIC TAGS: ion source, hydrogen ion, helium, ion beam focusing, chromatic aberration 21, 44, 55

ABSTRACT: This paper reports tests of an ion source, discussed in more detail elsewhere (G.N.Zinchenko. Diplomnaya rabota, KhGU, 1962), which operates at gas pressures from 10^{-4} to 10^{-6} mm Hg. The ion source employs an electron gun using a flat tungsten-barium cathode with a 2 mm diameter emitting surface, a focusing electrode, and a plane accelerating electrode located 0.5 cm from the cathode and having a 2 mm diameter opening through which the electrons enter the ionizing region. The electron beam is caught on a flat collector located 6 cm from the gun. A negative potential is applied to the collector so that ions formed in the region between the gun and the collector are attracted toward the collector and enter the accelerating tube through

Card 1/2

0701 1690

L 7737-66

ACC NR: AP5025906

3

a 5 mm diameter opening in the electrode. In the accelerating tube the ions were accelerated to 40 keV and focused on a point 150 cm distant. The focusing problem was somewhat complicated by the fact that the ions entered the accelerating tube with a rather wide range of energies, owing to the design of the ion source. Two different focusing systems were designed and tested, one employing an immersion lens and one employing two successive accelerating gaps. The design of these systems, which was accomplished with the aid of conventional design equations, is discussed at some length. Both performed satisfactorily. It was anticipated that owing to the low pressure in the ionizing region the production of multiply charged ions by successive ionization would be negligible. In order to test this the currents of singly and doubly charged He^3 ions were measured with a mass spectrometer as functions of the pressure of He^3 in the ion source. Both currents increased linearly with the pressure, and at the same rate, for pressures up to 10^{-4} mm Hg. The ratio of the He^{++} to the He^+ current was 5×10^{-3} ; this is in good agreement with the known ratio of the corresponding cross sections for He^4 . The maximum He^{++} current obtained was $0.02 \mu\text{A}$; this current was obtained with an electron beam current of 10 mA and a He^3 pressure of 10^{-4} mm Hg. The H^+ and H_2^+ ion currents were also measured when the ion source contained H_2 . Both currents increased linearly with pressure for pressures up to 5×10^{-5} mm Hg, but deviations from linearity were observed at higher pressures. The authors thank A.Ya.Taranov for his interest in the work. Orig. art. has: 1 formula, 7 figures, and 1 table. *44-55*

SUB CODE: NP/ SUEM DATE: 30Dec64/ ORIG REF: 004/ OTH REF: 002

Card 2/2 *AB*

FOGEL', Ya.M.; NADYKTO, B.T.; RYBALKO, V.F.; SLABOSPITSKIY, R.P.;
KOROBCHANSKAYA, I.Ye.

Possibility of using secondary ion-ion emission phenomena
in studying heterogeneous catalytic reactions. Dokl.
AN SSSR 147 no.2:414-417 N '62. (MIRA 15:11)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
Predstavлено академиком A.N. Frumkinym.

(Catalysis)
(Ionization of gases)

L 46061-66 EWT(1)/EWT(m)/EWP(t)/EPI IJD(c) JD/AT
ACC NR: AP6029802

SOURCE CODE: UR/0089/66/021/002/0131/0132

AUTHOR: Slabospitskiy, R. P.; Karnaukhov, I. M.; Kiselev, I. Ye.; Taranov, A. Ya.

ORG: none

TITLE: Source of polarized ions with 1.2 μ amp current

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 131-132

TOPIC TAGS: electric polarization, hydrogen ion, deuterium, ion beam, ion current, charge exchange, ION SOURCE

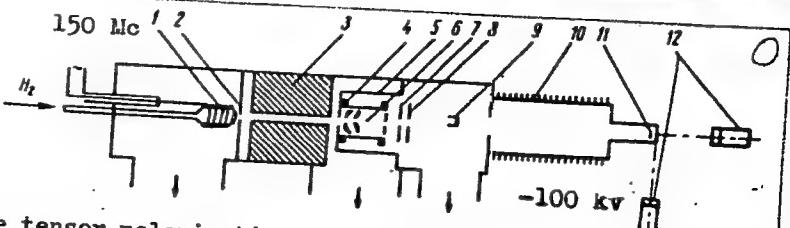
ABSTRACT: The described positive polarized deuterium-ion source is similar to an earlier source developed by the authors (Program and Abstracts of Papers of XVI Annual Conference on Nuclear Spectroscopy and Atomic Structure (Moscow, 1966), M., Nauka, 1966, p. 128) but employs a more efficient ionizer, and a higher vacuum is produced through the use of stainless steel and mercury and titanium pumps. The source is based on the principle of spin-sorting the atoms in an inhomogeneous magnetic field with subsequent adiabatic extraction to a weak field region (Fig. 1). Deuterium (or hydrogen) molecules are dissociated in an hf discharge at 150 Mcs. A magnetic field (20 kOe) focuses the atoms with electron spin projections antiparallel to the field, and defocuses the atoms with parallel spins. The focused atomic beam had an intensity 6×10^{15} atoms/sec in a 5 mm diameter, and was ionized by a coaxial

Card 1/2

UDC: 539.103: 539.121.85: 539.128.2

ACC NR: AP6029802

Fig. 1. Diagram of source



ally moving electron beam. The tensor polarization at a current of 1.2 microampere was found to be -0.274 ± 0.012. Orig. art. has: 1 figure [02]

SUB CODE: 20/ SUBM DATE: 01Apr66/ ORIG REF: 003/ OTH REF: 001./ ATD PRESS:
5089

Card 2/2 mt

SOURCE CODE: UR/0048/66/030/002/0240/0254

AUTHOR: Stepanov, V.V., Melnichev, O.I.; Popov, A.I.; Slabospitskiy, R.P.

ORG: Physico-chemical Institute, Academy of Sciences, UkrSSR (Fiziko-khimicheskiy
Institut Nauk Akademii Nauk UkrSSR)

TITLE: Inelastic scattering of protons by Ne-21. Spin and parity of the first excited state of Ne-21. Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February 1965/

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 249-254

TOPIC TAGS: proton scattering, inelastic scattering, gamma ray, nuclear energy level, neon,

ABSTRACT: The inelastic scattering of 1 to 3 MeV protons on Ne²¹ was investigated in order to obtain information concerning the excited states of the Na²² compound nucleus and to determine the spin and parity of the 350 keV first excited state of Ne²¹. An enriched (30% Ne²¹ and 70% Ne²⁰ and Ne²²) target of neon embedded in a 0.1 mm thick tantalum substrate was employed. The 90° yield of 350 keV gamma rays was determined as a function of incident proton energy. Some 60 resonances were observed, and the energies, widths, and relative intensities of 24 of them are tabulated. The resonances at proton energies below 2.3 MeV were mostly well separated, and their energies

Card 1/2

L 41
ACC NR: AP6019615

were determined with an accuracy of 6 keV; the resonances at higher proton energies were not well separated and they were not investigated further. Angular distributions of the 350 keV gamma rays associated with the different resonances were measured and the coefficients A_2 and A_4 in the expression $1 + A_2 P_2(\cos \theta) + A_4 P_4(\cos \theta)$ for the angular distribution are tabulated for 19 of the resonances. For all but 7 of the resonances the value obtained for A_4 was less than its probable error, and for only one of the resonances did A_4 exceed its probable error by as much as a factor 2. From that it is concluded that the spin of the 350 keV level does not exceed 5/2. Theoretical angular distributions were calculated with different assumptions concerning the spin and parity of the 350 keV Ne^{21} level and the characteristics of the Na^{22} states and are discussed at length in connection both with the present measurements and with data in the literature. It is concluded that the spin and parity of the 350 keV Ne^{21} level are 5/2⁺. The authors thank M. I. Guseva for providing the Ne^{21} target. Orig. art. has: 2 formulas, 2 figures and 4 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 003 OTH REF: 009

Card 2/2

L 44774-66 EFT(1) AT
ACC NR: AP6031272

SOURCE CODE: UR/0057/66/036/009/1681/1684

AUTHOR: Yekhichev, O. I.; Zinchenko, G. N.; Zinchenko, N. S.; Karnaughov, I. M.;
Slabospitskiy, R. P.; Taranov, A. Ya.

ORG: none

TITLE: An atomic beam ionizer as a source of polarized ions

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 9, 1966, 1681-1684

TOPIC TAGS: ionizer, polarized ions, polarized ion source, atomic beam ionizer,
electron beam, ionization

ABSTRACT: An ionizer based on the principle of ion focusing as developed and patented earlier by Zinchenko and others, is described in some detail. In this arrangement, the electron beam is coaxial with, instead of perpendicular to, the beam of polarized atoms, thus increasing the ionization length. The electron beam was produced by an electron gun with an oxide cathode 5.5 and 9.6 mm in inner and outer diameter, respectively. The distance from the cathode to the anode was about 7 mm, and from the anode to the collector, 60 mm. The hole diameters in the cathode, anode, and collector were 6, 7, and 8 mm, respectively. An investigation of the characteristics of the device revealed that the transmission factor of the electrons was 100 percent through the anode orifice, and 92 percent through the entire ionizer. The divergence of the electron beam was small, the beam diameter varying between 6 and 8 mm. A hydrogen atom beam produced by the dissociation of molecules in glow-discharge and

Card 1/2

UDC: 539.188

L. A. / ; b
ACC NR: AP6031272

focused according to atomic spins in a field of a magnetic quadrupole was introduced into the ionizer. The measured efficiency of ionization was found to be 4.5×10^{-4} at a 90-mamp electron current and a 1400-v potential difference between the cathode and anode. The mass-spectrometric data on the composition of the focused atomic beam showed that it consists of hydrogen atoms, thus confirming the stated efficiency of ionization. This efficiency is 3 to 5 times higher than the results reported in the Proceedings of the International Symposium on Polarization Phenomena of Nucleons (Birkhäuser Verlag, Basel und Stuttgart, 1961). Orig. art. has: 3 figures and 1 formula. [FP]

SUB CODE: 20/ SUBM DATE: 10Dec65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 5080

Card 2/2 U-R

ACC NR: A0 7001727

SOURCE CODE: UR/0048/C6/030/012/2031/2036

AUTHOR: Slobospitskiy,R.P.; Karinaukhov,I.M.; Yekhichev,O.I.; Taranov,A.Ya.

ORG: Paysicotechnical Institute, Academy of Sciences of the UkrSSR (Fiziko-tehnicheskiy institut Akademii nauk UkrSSR)

TITLE: A source of polarized ions /Report, Sixteenth annual Conference on Nuclear Spectroscopy and Nuclear Structure held at Moscow, 16 Jan. - 3 Feb. 1966/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 12, 1966, 2031-2036

TOPIC TAGS: ion source, hydrogen ion, deuterium, ion beam, proton polarization, deuteron polarization, polarized ion beam

ABSTRACT: The authors describe a source of polarized ions capable of producing a 0.3 μ A beam of polarized deuterons with a polarization tensor component P_{33} of - 0.274. The source can also be employed to produce a beam of polarized protons. In this source the electron spin components in a beam of deuterium atoms are separated in an inhomogeneous magnetic field and the resulting beam of atoms with aligned electron spins is ionized by electron impact. Owing to the coupling between the electron and nuclear spins in the atom, there results a partially polarized beam of deuterons. In the described device deuterium molecules were admitted through a palladium filter to a Pyrex vessel coated on the inside with $(CH_3)_2SiCl_2$ where they were dissociated by the 150 MHz field produced by a 1.5 kW oscillator. The deuterium atoms issued from the dissociation vessel through a microcollimator of glass capillaries and traversed

Card 1/2

ACC NR: AP 7001727

the field of a magnetic quadrupole which focused the component of the beam having the electron spins parallel to the direction of motion and defocused the component having antiparallel electron spins. The polarized atomic beam then traversed the ionizer where the atoms were ionized by impact of electrons moving in the same direction as the atomic beam. The polarized deuteron beam was subsequently accelerated to the desired energy. The ionizer was shielded from fringe fields by a soft steel jacket, and a uniform axial magnetic field was produced within it by a pair of Helmholtz coils. The thermionic cathode and the electron accelerator, focusing, and collector electrodes of the ionizer had central openings for passage of the atomic beam. For a more detailed description of an improved version of this ionizer see abstract AP 7001307. The polarization of the deuteron beam was determined by measuring the angular distribution of neutrons from the $T(d,n)He^4$ reaction at the 107 keV $3/2^+$ resonance. The authors thank A.P.Klyucharev for assistance and support, and B.P.Ad'yasevich for providing the microcollimators. Orig. art. has: 6 formulas and 7 figures.

SUB CODE: 20

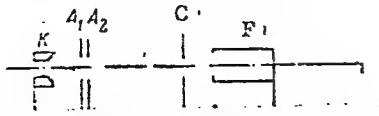
SUBM DATE: None

AORIG.REF: 007

OTH REF: 004

Card 2/2

ACC NR: AP 7001307



C and the Faraday cage F were at the same potential, 95% of the electrons passed through the first anode, 90% of them passed through the second anode, and 70% of the cathode current was collected in the Faraday cup. The currents to the several electrodes

are presented graphically as functions of the second anode potential, and the curves are discussed briefly. The optimum conditions for ionization of an atomic beam were also determined experimentally and are presented graphically. The ionizer was tested in the polarized ion source described by Yekhichev et al. (loc.cit.) and its ionizing efficiency was found to be 2×10^{-3} , which is some five times higher than the efficiency of an ionizer with a two-electrode electron gun. Orig. art. has: 1 formula and 3 figures.

SUB CODE: 20, 09 SUBM DATE: 05Mar66 ORIG. REF: 003 OTH REF: 002

Card 2/2

~~SECRET~~ SLABO SOSPITSKIY, R.Ye.

POGEL', Ya.M.; ANKUDINOV, V.A.; SLABO SOSPITSKIY, R.Ye.

Loss of two electrons in single collisions between negative hydrogen
ions and molecules of the gas. Zhur. ekspl. i teor. fiz. 32 no.3:453-
462 Mr '57. (MLRA 10:11)

1. Fiziko-tehnicheskiy institut ~~AN~~ USSR.
(Collisions (Nuclear physics))

ASKALONOV, Sergey Pavlovich; DOBRIYER, Isaak Borisovich; GORDIN, Boris L'vovich; SLABOSPITSKIY, T.P., red.; LOKHMATYY, Ye.G., tekhnred.

[Microbiological investigation and hygienic inspection of food products] Mikrobiologicheskoe issledovanie i sanitarnaia ekspertiza pishchevykh produktov. Izd.3., ispr. i dop. Kiev, Gos.med.izd-vo USSR, 1959. 333 p. (MIRA 12:9)

(FOOD--BACTERIOLOGY)

SLABOV, S.

"Conditions and possibilities in our turbine industry", P. 11.,
(TEHNKA PROMISHLENOST, Vol. 3, No. 6, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 6, June 1955, Uncl.

SLABOV, S.

Construction of Frantsis water turbines. p. 20. (p. 21-23 wanting)

Vol. 4, no. 3, Mar. 1955

TEKHNIKA

Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

SLABOV, S.

Slabov, S. New powerful turbine for our electrification. p.53.

Vol. 4, no. 10, 1955 T. ZHKA PROMISHLENOST Sofiya, Bulgaria

SO: Monthly List of East European Accessions, (EEL), LC, Vol. 5, No. 2
February, 1956

12(2)

SOV/113-59-7-10/19

AUTHOR: Slabov, Ye. P., Pavlova, Z.A.TITLE: Increasing the Wear Resistance of Cylinder Sleeves
of YaMZ EnginesPERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 7, pp 30 - 31
(USSR)

ABSTRACT: At the Yaroslavl' Engine Plant, tests with cylinder sleeves for YaMZ engines were conducted. It was established that cylinder sleeves should be used for YaMZ-204 and YaMZ-206 engines, which have perlite structure prior to the heat treatment with fine or medium laminar graphite. After heat treatment, their hardness must be $R_C = 42+50$. The wear resistance of such liners is about 28% higher. The chemical composition of the cast iron used for the experimental and series sleeves had the following composition: 3.2-3.4% C; 2.2-2.4% Si; 0.6-0.9% Mn; up to 0.3% P; up to

Card 1/3

SOV/113-59-7-10/19

Increasing the Wear Resistance of Cylinder Sleeves of YaMZ Engines

0.1% S; 0.25-0.75% Cr; 0.25-0.75 Ni; 0.08-0.12% Ti; 0.3-0.5 % Cu. Also chrome-silicon sleeves were tested, having the following composition: 2.0-2.5% C; 0.6-1.2% Si; 0.6-0.8 Mn; 13-15% Cr; 0.03-0.5%; and a hardness of $R_C = 30+32$. The cylinder sleeves were installed

in engines of the following test trucks: MAZ-200, MAZ-205, YaAZ-210, YaAZ-214 and bus ZIL-127. One batch of the sleeves was sulfidized in a tank containing the following compound: 27% CaCl_2 ; 13% NaCl ; 46% RCNS; 2% Sb_2S_3 ; 2% $\text{K}_4\text{Fe}(\text{CN})_6$; and 10% of a sulfurous alloy.

Experiments showed that the wear of sulfidized and unsulfidized sleeves is identical. The results of the experiments are compiled in three tables. The experi-

Card 2/3

SOV/113-59-7-10/19

Increasing the Wear Resistance of Cylinder Sleeves of YaMZ Engines
ments were performed in cooperation with NAMI. There
are 3 tables and 2 Soviet references.

ASSOCIATION: Yaroslavskiy motornyy zavod (Yaroslavl' Engine Plant)

Card 3/3

SIABU, Z.; FIROIU, C.

A contribution to study of cadmium galvanic deposit. p. 281.

METALURGIA SI CONSTRUCTIA DE MASINI. (Ministerul Industriel Metalurgice si Constructiilor de Masini si Asociatia Stiintifica a Inginerilor si Technicienilor din Romania.) Bucuresti, Rumania; Vol. 11, no. 4, April, 1959

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 9, Sept. 1959

Uncl.

SLABUNOV, A.

27-3-16/32

SUBJECT: USSR/Schooling

AUTHOR: Ran'kov, M., Director of Trade School # 14,
Slabunov, A., Deputy Director of Schooling Section,
Galin, A., Instructor of Special Technology.

TITLE: Life Demands This (Zhizn' etogo trebuyet)
Subtitle: On the Question of Training Gas- and Electric
Welders (K voprosu o podgotovke elekrogazosvarshchikov)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, Aug. 1957,
8, p 26-27 (USSR)

ABSTRACT: The authors regret that the program issued in 1956 by the
Chief Administration of Labor Reserves for training gas and
electric welders in trade and railroad schools contains a
number of mistakes. The electric and gas welding section of
the Vyksa Region Methodical Union (Gor'ki Province Administrat-
ion of Labor Reserves) has come to this conclusion after hav-
ing thoroughly studied the program.
The authors emphasize the difference between welders trained
at the FZO (fabrichnozavodskoye obucheniye) industrial schools
for limited training only, and the highly qualified, licensed

Card 1/2

Slabutskiy G.Ya.

YEGOROV, B.P., inzhener; SLABUTSKIY, G.Ya., inzhener.

Experience in building cooling towers. Elek.sta. 25 no.12:
41-42 D '54.
(Cooling towers)

~~SECRET//COMINT//NOFORN~~

Country: Czechoslovakia

Academic Degrees:

No IV Clinic of Internal Medicine (IV. vnitřní lékařství) of MU (Masarykova univerzita; Charles University), Prague. Head: professor Dr. M. FUCIK.

Sources: Prague, Všeobecná Lékárna, No 4, Apr 61, pp 426-432

Date: "Unusual Development of TCG Appearances in Hyperthyreosis."

Co-author:

KLINE, Ota, Dr. No IV Clinic, etc.

SLABY, A., RIEDL, O.; technicka spoluprace: ANTOS, Sl.; LIPSKY, A.

Body weight and body height in old patients in Czechoslovakia.
Sborn.lek.63 no.1:11-17 Ja '61.

I. IV. interni klinika fakulty vseobecneho lekarstvi University
Karlovych v Praze, prednosta prof.dr. M.Fucik; II. patologickoana-
tomicky ustav fakulty vseobecneho lekarstvi University Karlovych v
Praze, prednosta prof.dr. V.Jedlicka.

(BODY WEIGHT in old age)
(BODY WEIGHT in old age)

FUCIK, M.; KRYSPIN, J.; SLABY, A.

Changes in electrical conductivity of the skin in gastrointestinal diseases with dermal pain projection. Cas.lek.cesk 100 no.22:667-670 2 Je '61.

1. IV. interni klinika KU v Praze, prednosta prof. dr. M. Fucik,
Laborator plastické chirurgie CSAV, prednosta akademik F. Burian.

(GASTROENTEROLOGY physiol) (SKIN physiol)